



Ezra Baker School 810 Route 28 West Dennis, Massachusetts

### **AHERA 3-YEAR RE-INSPECTION REPORT**

August 2022

#### PREPARED FOR:

Dennis-Yarmouth Regional School District 296 Station Avenue South Yarmouth, Massachusetts Attention: Ms. Sandra Cashen

#### **PREPARED BY:**

The Vertex Companies, LLC. 400 Libbey Parkway Weymouth, MA 02189 781-952-6000

**VERTEX Project No: 80960** 

### **Table of Contents**

Section 1 - Introduction

- Bulk Sampling Methodology

- Updated Homogeneous Area Hazard Assessment

Section 2 - Response Action Determination

Section 3 - Updated Recommended Response Actions

Section 4 - Recordkeeping Requirements and Recommendations

Section 5 - Estimated Resources Needed to Complete Response Actions

Section 6 - Estimated Resources Required for the Abatement of the Identified ACBMs

Section 7 - Operations and Maintenance

#### **Appendices**

Appendix A - Locations of the ACBMs and Updated Conditions

Appendix B - Estimated Costs to Needed to Complete the Response Actions

Appendix C - Estimated Costs to for Abatement of the Identified ACBMs

Appendix D - Personnel Certifications

Appendix E - Designated Person Assurances

Appendix F - Six-Month Surveillance

Appendix G - Schematics



#### Introduction

The Vertex Companies, LLC. (VERTEX) conducted a 3-Year Reinspection on August 3<sup>rd</sup>, 2022 as required by the 40 CFR 763 Asbestos Hazard Emergency Response Act (AHERA) at the Ezra Baker Elementary School located at 810 Route 28 in West Dennis, Massachusetts. The AHERA regulation requires that each Local Education Agency (LEA) retain a certified/accredited Asbestos Inspector to conduct a re-inspection of all friable and non-friable known or assumed asbestos-containing building materials (ACBM) in each school building that they lease, own, or otherwise uses as a school building every three years since the initial inspection. The AHERA reinspection is to be performed by an accredited inspector at least once every three years from the time of implementation of the original management plan. In addition, the LEA is responsible for conducting Six-Month Periodic Surveillance Inspections as required to effectively manage the identified ACBMs in place at the school.

The initial AHERA inspection was conducted by Universal Engineering Corporation (Universal) of Boston, MA in August 1988. Based on the initial inspection Universal prepared an Asbestos Management Plan (AMP) for the Ezra Baker Elementary School in August 1988. The following is a list of dates and consultants that have conducted the required 3-Year Reinspections. Additionally, the following list of reinspections have been provided and maintained by the Dennis-Yarmouth (D-Y) Regional School District:

Date Consultant

October 1991 Universal of Boston, MA

July 2000FLI Environmental of Dedham, MAJuly 2003FLI Environmental of Dedham, MASeptember 2011FLI Environmental of Dedham, MAJune 2012 (Revised 2011 Report)FLI Environmental of Dedham, MA

May 2013 Vertex Air Quality Services, LLC, Weymouth, MA

August 2016 The Vertex Companies, Inc.
July 2019 The Vertex Companies, Inc.

The current AHERA 3-Year Re-inspection Report conducted by VERTEX is presented to the D-Y Regional School District as an addendum to the original Management Plan and should be incorporated into the school's Management Plan folder.

The D-Y Regional School District and/or the Ezra Baker Elementary School may utilize the information obtained from the AHERA Re-inspection and the data compiled in the existing Management Plan to effectively manage the ACBMs present in the Ezra Baker Elementary School in West Dennis, Massachusetts.



### **SECTION 1**

**INSPECTION REPORT** 



# Section 1 Inspection Report Re-inspection Protocol

Massachusetts Department of Labor Standards (DLS) Certified Asbestos Inspector, Jason Mohre (Al#0000262) performed the AHERA Re-inspection. The updated Management Plan was developed by Massachusetts DLS Certified Asbestos Management Planner, Jason Mohre (AP#000080). The purpose of the reinspection was to identify if the hazard potential of the ACBMs or assumed ACBMs has changed since the last inspection as well as sample and assess any suspect ACBMs not listed in the original management plan. As required by the AHERA regulation, the reinspection survey procedures must include a visual re-inspection and reassessment of the condition of all known locations of friable and non-friable ACBMs. The visual inspection consists of touching ACBM, which was previously considered non-friable to determine whether the ACBM has become friable since last re-inspection. It should be noted that under the AHERA regulations only ACBMs are inspected, other asbestos containing materials (ACMs) may be associated with the school that do not fall under AHERA ACBM definition. Examples of materials which have been found to contain asbestos include but are not limited to exterior window caulking, window glazing, and roofing material. Prior to school renovations any suspect materials not sampled or listed within the school's AMP, must be tested prior to disturbance. Furthermore, VERTEX recommends an Asbestos Containing Materials (ACMs) Survey be conducted prior to any renovation activities to comply with the Environmental Protection Agency (EPA) Title 40 CFR Part 61, National Emissions Standards for Hazardous Air Pollutants (NESHAPs) and the Massachusetts Department of Environmental Protection Regulations. Documentation for subsequent surveys not related to AHERA should be included in the overall Management Plan.

In addition, hazard assessment of known friable materials and newly determined friable materials must be recorded and submitted to the school's Designated Person. Assessment of potential asbestos hazards is subject to each individual inspector's judgment, and as a result, hazard assessments may vary.

Furthermore, the LEA Designated Person should assume that potential asbestos-containing pipe and fitting insulation may be located behind walls and ceilings not accessible. Any renovation/demolition work that may penetrate these areas should be inspection.

All available documentation of asbestos abatement projects, which have occurred since the initial AHERA inspection should be included with the reinspection report. VERTEX has reviewed the following Abatement Records provided and maintained by the D-Y Regional School District:

Date Consultant

May 1989 Universal of Boston, MA

July 2011 Universal Environmental Consultants of Framingham, MA
August 2011 Universal Environmental Consultants of Framingham, MA

February 2014 The Vertex Companies, Inc. of Weymouth, MA
July 2015 The Vertex Companies, Inc. of Weymouth, MA
January 2016 The Vertex Companies, Inc. of Weymouth, MA
August 2016 The Vertex Companies, Inc. of Weymouth, MA
August 2019 The Vertex Companies, Inc. of Weymouth, MA



# Section 1 Inspection Report Re-inspection Protocol (continued)

In addition, VERTEX was provided and reviewed the maintained six-month surveillance inspections conducted since the past 3-year re-inspection. No concerns were noted upon review of the six-month surveillance inspections records.

Appendix D contains Certification Page for the Inspector and Management Planner involved with the reinspection of the school as well as a copy of the LEA's Designated Person's training.

Locations of the identified ACBMs with quantities observed, conditions assessed, homogeneous hazard assessment and changes since the previous re-inspection report are presented in Appendix A of this report.



# Section 1 Inspection Report (cont.) Bulk Sampling Methodology

Bulk samples were not collected during the current re-inspection activities in August 2022. However, VERTEX had collected and analyzed the following bulk samples of suspect homogeneous materials within the facility during an AHERA inspection conducted in April 2013. Please refer to Table 1 below for a summary of the bulk samples collected and analyzed.

Table I -Sample Locations and Results (April 2013)				
Sample Number	Sample Description	Sample Location	Asbestos Content	
B-415-01A	Plaster Skim Coat	LL, Kitchen	None Detected	
B-415-01B	Plaster Skim Coat	LL, Cafeteria	None Detected	
B-415-01C	Plaster Skim Coat	UL, Staff Lunch	None Detected	
B-415-01D	Plaster Skim Coat	UL, Room 114	None Detected	
B-415-01E	Plaster Skim Coat	UL, Room 101	None Detected	
B-415-01F	Plaster Skim Coat	Attic	None Detected	
B-415-01G	Plaster Skim Coat	UL, Conference Room	None Detected	
B-415-02A	Plaster Base Coat	LL, Kitchen	None Detected	
B-415-02B	Plaster Base Coat	LL, Cafeteria	None Detected	
B-415-02C	Plaster Base Coat	UL, Staff Lunch	None Detected	
B-415-02D	Plaster Base Coat	UL, Room 114	None Detected	
B-415-02E	Plaster Base Coat	UL, Room 101	None Detected	
B-415-02F	Plaster Base Coat	Attic	None Detected	
B-415-02G	Plaster Base Coat	UL, Conference Room	None Detected	
B-415-03A	Carpet Pad Adhesive	UL, Room 118	None Detected	
B-415-03B	Carpet Pad Adhesive	UL, Room 116	None Detected	
B-415-04A	9" x 9" Blue Floor Tile	UL, Room 118	6 % Chrysotile	
B-415-04B	9" x 9" Blue Floor Tile	UL, Room 116	Positive Stop	
B-415-05A	9" x 9" Blue Floor Tile Mastic	UL, Room 118	2 % Chrysotile	
B-415-05B	9" x 9" Blue Floor Tile Mastic	UL, Room 116	Positive Stop	
B-415-06A	9" x 9" Gray/Tan Floor Tile	UL, Room 117	6 % Chrysotile	
B-415-06B	9" x 9" Gray/Tan Floor Tile	UL, Room 103	Positive Stop	
B-415-07A	9" x 9" Gray/Tan Floor Tile Mastic	UL, Room 117	3 % Chrysotile	
B-415-07B	9" x 9" Gray/Tan Floor Tile Mastic	UL, Room 103	Positive Stop	
B-415-08A	9" x 9" Dark Brown Floor Tile	UL, Room 104	8 % Chrysotile	
B-415-08B	9" x 9" Dark Brown Floor Tile	UL, Room 104	Positive Stop	
B-415-09A	9" x 9" Dark Brown Floor Tile Mastic	UL, Room 104	None Detected	
B-415-09B	9" x 9" Dark Brown Floor Tile Mastic	UL, Room 104	None Detected	
B-415-10A	12" x 12" Tan Streak Floor Tile	UL, Corridor # 1	None Detected	
B-415-10B	12" x 12" Tan Streak Floor Tile	UL, Staff Lunch	None Detected	
B-415-11A	12" x 12" Tan Streak Floor Tile Mastic	UL, Corridor # 1	2 % Chrysotile	
B-415-11B	12" x 12" Tan Streak Floor Tile Mastic	UL, Staff Lunch	Positive Stop	



Table I -Sample Locations and Results (April 2013)

Table I -Sample Locations and Results (April 2013)				
Sample Number	Sample Description	Sample Location	Asbestos Content	
B-415-12A	12" x 12" Brown Streak Floor Tile	UL, Janitor Closet by 111	None Detected	
B-415-12B	12" x 12" Brown Streak Floor Tile	UL, Janitor Closet by 111	None Detected	
B-415-13A	12" x 12" Brown Streak Floor Tile Mastic	UL, Janitor Closet by 111	2 % Chrysotile	
B-415-13B	12" x 12" Brown Streak Floor Tile Mastic	UL, Janitor Closet by 111	Positive Stop	
B-415-14A	12" x 12" Beige Spec Floor Tile	UL, Room 119	None Detected	
B-415-14B	12" x 12" Beige Spec Floor Tile	UL, Room 119	None Detected	
B-415-15A	12" x 12" Beige Spec Floor Tile Mastic	UL, Room 119	2 % Chrysotile	
B-415-15B	12" x 12" Beige Spec Floor Tile Mastic	UL, Room 119	Positive Stop	
B-415-16A	Black Covebase	UL, Room 101	None Detected	
B-415-16B	Black Covebase	UL, Room 103	None Detected	
B-415-17A	Black Covebase Adhesive	UL, Room 101	None Detected	
B-415-17B	Black Covebase Adhesive	UL, Room 103	None Detected	
B-415-18A	Drywall	UL, Room 119	None Detected	
B-415-18B	Drywall	UL, Room 119	None Detected	
B-415-19A	Joint Compound	UL, Room 119	None Detected	
B-415-19B	Joint Compound	UL, Room 119	None Detected	
B-415-19C	Joint Compound	UL, Room 119	None Detected	
B-415-20A	1' x 1' Ceiling Tile (Dot)	UL, Room 117	None Detected	
B-415-20B	1' x 1' Ceiling Tile (Dot)	UL, Room 110	None Detected	
B-415-21A	2' x 4' Ceiling Tile (Textured)	LL, Hall Closet by Rm. 131	None Detected	
B-415-21B	2' x 4' Ceiling Tile (Textured)	LL, Hall Closet by Rm. 131	None Detected	
B-415-22A	2' x 4' Ceiling Tile (Speckled/Dot)	LL, Cafeteria	None Detected	
B-415-22B	2' x 4' Ceiling Tile (Speckled/Dot)	LL, Cafeteria	None Detected	
B-415-23A	2' x 4' Ceiling Tile (Fissure/Dot)	UL, Room 119	None Detected	
B-415-23B	2' x 4' Ceiling Tile (Fissure/Dot)	UL, Room 119	None Detected	
B-415-24A	Plaster Ceiling	Boiler Room	None Detected	
B-415-24B	Plaster Ceiling	Boiler Room	None Detected	
B-415-24C	Plaster Ceiling	Boiler Room	None Detected	
B-415-25A	Plaster Skim Coat (Original Structure)	UL, Womens Room by 107/108	None Detected	
B-415-25B	Plaster Skim Coat (Original Structure)	LL, Room 143	None Detected	
B-415-25C	Plaster Skim Coat (Original Structure)	LL, Janitor Closet by Boiler Room	None Detected	
B-415-25D	Plaster Skim Coat (Original Structure)	UL, Room 110	None Detected	
B-415-25E	Plaster Skim Coat (Original Structure)	UL, Gym Storage	None Detected	
B-415-25F	Plaster Skim Coat (Original Structure)	2 <sup>nd</sup> Floor, Room 202	None Detected	
B-415-25G	Plaster Skim Coat (Original Structure)	2 <sup>nd</sup> Floor, Room 205	None Detected	
B-415-26A	Plaster Base Coat (Original Structure)	UL, Womens Room by 107/108	None Detected	
B-415-26B	Plaster Base Coat (Original Structure)	LL, Room 143	None Detected	
B-415-26C	Plaster Base Coat (Original Structure)	LL, Janitor Closet by Boiler Room	None Detected	
B-415-26D	Plaster Base Coat (Original Structure)	UL, Room 110	None Detected	
B-415-26E	Plaster Base Coat (Original Structure)	UL, Gym Storage	None Detected	
B-415-26F	Plaster Base Coat (Original Structure)	2 <sup>nd</sup> Floor, Room 202	None Detected	
B-415-26G	Plaster Base Coat (Original Structure)	2 <sup>nd</sup> Floor, Room 205	None Detected	



Table I -Sample Locations and Results (April 2013)

Sample Number	Sample Description	Sample Location	Asbestos Content
B-415-27A	Black Mastic on Wall	Womens Room by 110	None Detected
B-415-27B	Black Mastic on Wall	Womens Room by 110	None Detected
B-415-28A	Drywall	LL, Basement Hall	None Detected
B-415-28B	Drywall	LL, Art Room	None Detected
B-415-29A	Joint Compound	LL, Basement Hall	None Detected
B-415-29B	Joint Compound	LL, Basement Hall	None Detected
B-415-29C	Joint Compound	LL, Room 139	None Detected
B-415-29D	Joint Compound	LL, Music Room	None Detected
B-415-29E	Joint Compound	LL, Art Room	None Detected
B-415-30A	12" x 12" Tan Spec Floor Tile	LL, Art Room	None Detected
B-415-30B	12" x 12" Tan Spec Floor Tile	LL, Art Room	None Detected
B-415-31A	12" x 12" Tan Spec Floor Tile Mastic	LL, Art Room	None Detected
B-415-31B	12" x 12" Tan Spec Floor Tile Mastic	LL, Art Room	None Detected
B-415-32A	12" x 12" Mauve Floor Tile	LL, Music Room	None Detected
B-415-32B	12" x 12" Mauve Floor Tile	LL, Room 141	None Detected
B-415-33A	12" x 12" Mauve Floor Tile Mastic	LL, Music Room	None Detected
B-415-33B	12" x 12" Mauve Floor Tile Mastic	LL, Room 141	None Detected
B-415-34A	12" x 12" Gray Floor Tile	LL, Basement Hall	None Detected
B-415-34B	12" x 12" Gray Floor Tile	LL, Room 128	None Detected
B-415-35A	12" x 12" Gray Floor Tile Mastic	LL, Basement Hall	None Detected
B-415-35B	12" x 12" Gray Floor Tile Mastic	LL, Room 128	None Detected
B-415-36A	12" x 12" Green Spec Floor Tile	2 <sup>nd</sup> Floor, Hallway	2 % Chrysotile
B-415-36B	12" x 12" Green Spec Floor Tile	2 <sup>nd</sup> Floor, Hallway	Positive Stop
B-415-37A	12" x 12" Green Spec Floor Tile Mastic	2 <sup>nd</sup> Floor, Hallway	2 % Chrysotile
B-415-37B	12" x 12" Green Spec Floor Tile Mastic	2 <sup>nd</sup> Floor, Hallway	Positive Stop
B-415-38A	2' x 4' Ceiling Tile (Fissure/Dot)	2 <sup>nd</sup> Floor, Room 202	None Detected
B-415-38B	2' x 4' Ceiling Tile (Fissure/Dot)	LL, Art Room	None Detected
B-415-39A	Foil Back Fiberglass Pipe Insulation Jacket	LL, Room 130-132 Hallway	None Detected
B-415-39B	Foil Back Fiberglass Pipe Insulation Jacket	LL, Room 130-132 Hallway	None Detected
B-415-39B	Foil Back Fiberglass Pipe Insulation Jacket	LL, Room 130-132 Hallway	None Detected



#### Table IA -Sample Locations and Results (December 2020)

Sample Number	Sample Description	Sample Location	Asbestos Content
B-1214-01A	1' x 1' Ceiling Tile (Dot)	Upper Level, Room 106	None Detected
B-1214-01B	1' x 1' Ceiling Tile (Dot)	Upper Level, Room 106	None Detected
B-1214-02A	Brown Glue Daubs associated w/ Ceiling Tile	Upper Level, Room 106	None Detected
B-1214-02B	Brown Glue Daubs associated w/ Ceiling Tile	Upper Level, Room 106	None Detected
B-1214-03A	Blown-in Insulation	Attic	None Detected
B-1214-03B	Blown-in Insulation	Attic	None Detected
B-1029-03C	Blown-in Insulation	Attic	None Detected
B-1214-03A	Batt Insulation	Attic	None Detected
B-1214-03B	Batt Insulation	Attic	None Detected

Based on sampling of homogenous suspect ACBMs identified by VERTEX within the facility, VERTEX has determined the following:

#### The following is a list of homogenous materials that were determined or assumed to be ASBESTOS-CONTAINING:

Pipe Insulation Pipe Fitting Insulation

Interior Boiler Insulation Flexible Duct Cloth Connectors

**Interior Window Caulking** Vermiculite Insulation

9" x 9" Blue Floor Tile 9" x 9" Blue Floor Tile Mastic 9" x 9" Gray/Tan Floor Tile 9" x 9" Gray/Tan Floor Tile Mastic 9" x 9" Dark Brown Floor Tile 9" x 9" Dark Brown Floor Tile Mastic 12" x 12" Tan Streak Floor Tile Mastic 12" x 12" Brown Streak Floor Tile Mastic 12" x 12" Green Spec Floor Tile Mastic

12" x 12" Green Spec Floor Tile

Wood Flooring Paper

### The following is a list of materials that were found and determined to be NON-ASBESTOS-**CONTAINING:**

Plaster Skim Coat **Plaster Base Coat** Drywall Joint Compound

**Plaster Ceiling** Carpet Pad Adhesive **Black Covebase** 

**Black Covebase Adhesive** 1' x 1' Ceiling Tile (Dot) 2' x 4' Ceiling Tile (Textured) 2' x 4' Ceiling Tile (Speckled/Dot) 2' x 4' Ceiling Tile (Fissure/Dot)

12" x 12" Tan Spec Floor Tile 12" x 12" Tan Spec Floor Tile Mastic 12" x 12" Mauve Floor Tile 12" x 12" Mauve Floor Tile Mastic 12" x 12" Gray Floor Tile 12" x 12" Gray Floor Tile Mastic

Foil Back Fiberglass Pipe Insulation Jacket Black Mastic on Wall Brown Glue Daubs associated w/1' x 1' Ceiling Tile B lown-in Insulation



# Section 1 Inspection Report (cont.)

#### **Updated Hazard Assessment**

All known locations of friable and non-friable ACBM were re-inspected to determine whether a change in the ACBMs condition has occurred since the initial AHERA inspection. From the reinspection, an asbestos hazard assessment was performed. Factors considered when assessing asbestos hazard include;

- 1. The friability of the material;
- 2. The condition if material including type, severity and extent of damage;
- 3. The material's potential for disturbance including accessibility and air flow;
- 4. The material's potential for damage.

The location, estimated quantities, condition and Homogenous Area Hazard Assessment Category for the identified ACBMs are presented in Appendix A. The following is an updated homogenous area assessment for each homogeneous area.

#### **Homogeneous Area Assessment**

#### Homogeneous Area #1- Pipe Insulation

#### **Classification: Thermal System Insulation**

Asbestos-containing pipe insulation is generally located throughout the school. Please refer to Appendix A which includes the locations and estimated quantities. The pipe insulation is friable and presents a potential for damage.

#### Homogeneous Area #2-Pipe Fitting Insulation

#### **Classification: Thermal System Insulation**

Asbestos-containing pipe fitting insulation is located at the school. The pipe fitting insulation is friable and presents a potential for damage. The pipe fitting insulation is located in the following areas within the Lower Level of the Original Structure: Electrical Room, Music Room, Room #s 126, 127, 128, and the Janitor Closet by Room 128. Pipe fitting insulation was also identified in the following areas within the Upper Level of the Original Structure: Mens Room Chase, Womens Room by Main Stair, Mens Room by 109, Womens Room by 110, and Rooms 109 and 110. The pipe fitting insulation is also within Room 131 and Room 130-131 Hallway in the Lower Level of the Addition Structure. All pipe fitting insulation within the school should be considered to be asbestos-containing and managed following all applicable regulations.



### Section 1 Inspection Report (cont.)

#### Homogeneous Area #3- 9" x 9" Gray/Tan/Blue/Floor Tile and Mastic

**Classification: Non-Friable Miscellaneous ACBM** 

Asbestos-containing 9"x 9" Gray/Tan/Blue/Floor Tile and Mastic is located within the Custodial Mop Sink Area by the Kitchen. The 9"x 9" Gray/Tan/Blue/Floor Tile and Mastic displays minor damage, is non-friable and presents a potential for damage.

#### Homogeneous Area #4- 9" x 9" Brown Floor Tile and Mastic

Classification: Non-Friable Miscellaneous ACBM

Asbestos-containing 9"x 9" Brown Floor Tile and Mastic is located within the Rear Delivery Entrance by the Kitchen. The 9"x 9" Brown Floor Tile and Mastic is in generally good condition, non-friable and presents a potential for damage.

#### Homogeneous Area #9- Black Residual Mastic

Classification: Non-Friable Miscellaneous ACBM

Asbestos-containing Black Residual Mastic is located under Non-Asbestos Containing Flooring Materials (i.e. various colored 12"x 12" Floor Tile, Carpet, etc.) at the school. The Black Residual Mastic is located within the following areas under Non-Asbestos Containing Flooring Materials in the Room 138, Room 119 (Staff Lunch) and Conference Room. Renovation flooring project conducted in July 2015 and July 2016 had removed a large majority of the contaminated flooring and associated black mastic

#### Homogeneous Area #10 (Previous HA # 3) - Flexible Duct Cloth Connectors

**Classification: Non-Friable Miscellaneous ACBM** 

Asbestos-containing Flexible Duct Cloth Connectors is located within the Attic Area in the Addition Structure. The materials were observed to be in good condition and non-friable.

#### Homogeneous Area #11- Wood Flooring Paper

Classification: Non-Friable Miscellaneous ACBM

Assumed asbestos-containing Wood Flooring Paper is located under the wood floor areas within the first and second floor in the Original Section at the school. The materials were observed to be to be covered and are assumed to be non-friable.



### Section 1 Inspection Report (cont.)

### **Updated Hazard Assessment**

#### **Homogeneous Area #12- Interior Boiler Materials**

Classification: Non-Friable Miscellaneous ACBM/Thermal System Insulation

Assumed asbestos-containing Interior Boiler Materials within the two boilers located within the Original Section at the school.

#### Homogeneous Area #13- Interior Window Caulking/Glazing

Classification: Non-Friable Miscellaneous ACBM

Assumed asbestos-containing Interior Window Caulking and Glazing is located within the Kitchen Storage Area.

#### Homogeneous Area #14- Vermiculite Insulation

Classification: Non-Friable Miscellaneous ACBM

Asbestos-containing vermiculite insulation is located within the Original Section Attic Area. The vermiculite insulation is covered by blow-in non-asbestos containing insulation.



### Section 2 Response Action Determination

The following is based on the Decision Tree for Thermal System Insulation Type ACM. The recommended response actions are determined utilizing the "decision tree" approach for Response Action Determination as outlined in EPA's "Asbestos Hazard Emergency Response Act," (AHERA) 40 CFR 763. Because of defined friability factors associated with surfacing and miscellaneous materials versus thermal system insulation, separate decision trees are utilized for each group of materials.

Decision Trees are used to estimate the risk associated with exposure to asbestos in a given homogeneous area, and to recommend certain response actions, which are consistent with regulatory requirements. Eight response actions are recommended for both thermal system insulation and for surfacing/miscellaneous insulation. The response section number given to each homogeneous area indicates a priority for action, the lower the number, the more serious the hazard. Most response actions call for an operations and maintenance program, assuming that this is the least burdensome method which still protects human health and environment. This does not prohibit the building owner from removal of ACM at any time, if that is the preferred response action.

Recommended response actions are based upon the material condition, disturbance, air-flow and the potential for damage. Potential response actions include the following:

- 1. <u>Significantly Damaged Thermal System Insulation:</u> **Response Action 1.** Isolate the area and restrict access to the area. ACM should be removed as soon as possible.
- Damaged Thermal System Insulation with High Disturbance: Response Action 2. Continue O&M program and remove the ACM as soon as possible or reduce the potential for disturbance.
- 3. <u>Damaged Thermal System Insulation with Moderate Disturbance and in the Presence of an Air Stream:</u> Response Action 2. Continue with O&M Program and remove the ACM as soon as possible or reduce the potential for disturbance.
- 4. <u>Damaged Thermal System Insulation with Moderate Disturbance:</u> **Response Action 3.** Repair ACM, continue with O&M Program.
- 5. <u>Damaged Thermal System Insulation with Low Disturbance and in the Presence of an Air Stream:</u> Response Action 4. Repair ACM, continue with O&M Program.
- 6. <u>Damaged Thermal System Insulation with Low Disturbance:</u> **Response Action 5.** Repair ACM, continue with O&M Program.
- 7. <u>Undamaged Thermal System Insulation with High Disturbance</u>: **Response Action 6.** Continue with O&M Program and take preventative measures to reduce disturbance.
- 8. <u>Undamaged Thermal System Insulation with Moderate Disturbance:</u> **Response Action 7.** Continue with O&M Program and take preventative measure to reduce disturbance.
- 9. <u>Undamaged Thermal System Insulation with Low Disturbance:</u> **Response Action 7.** Continue with O&M Program and take preventative measure to reduce disturbance.



### SECTION 2

**RESPONSE ACTION DETERMINATION** 



# Section 2 Response Action Determination (continued)

The following is based on the Decision Tree for Surfacing and Miscellaneous ACM. Recommended response actions are based upon friability, material condition, disturbance, air flow and the potential for damage. Potential response actions include the following:

- 1. <u>Friable Surfacing or Miscellaneous ACM with Significant Damage:</u> **Response Action 1:** Isolate the area and restrict access to the area. Remove the ACM as soon as possible.
- 2. <u>Friable Surfacing or Miscellaneous ACM with Damage and a High Disturbance:</u> **Response Action 2:** Continue with O&M Program and remove ACM as soon as possible or reduce the potential for disturbance.
- 3. <u>Friable Surfacing or Miscellaneous ACM with Damage, Moderate Disturbance and in the Presence of an Air Stream:</u> **Response Action 2:** Continue with O&M Program and remove ACM as soon as possible or reduce the potential for disturbance.
- 4. <u>Friable Surfacing or Miscellaneous ACM with Damage and Moderate Disturbance:</u> **Response Action 3:** Continue with O&M Program and schedule removal when practical and costeffective
- 5. <u>Friable Surfacing or Miscellaneous ACM with Damage, Low Disturbance and in the Presence of an Air Stream:</u> **Response Action 4:** Continue with O&M Program and schedule removal when practical and cost-effective
- 6. <u>Friable Surfacing or Miscellaneous ACM with Damage and Low Disturbance:</u> **Response Action 5.** Continue with O&M Program and schedule removal when practical and costeffective
- 7. <u>Friable Surfacing or Miscellaneous ACM with No Damage and High Disturbance:</u> **Response Action 6.** Take preventative measures to reduce the disturbance.
- 8. <u>Friable Surfacing or Miscellaneous ACM with No Damage and Moderate Disturbance:</u> **Response Action 7.** Take preventative measure to reduce the disturbance.
- 9. <u>Friable Surfacing or Miscellaneous ACM with No Damage and Low Disturbance:</u> **Response Action 8.** Take preventative measure to reduce the disturbance.
- Non-Friable Surfacing or Miscellaneous ACM: Response Action 8: Continue with O&M until major renovation or demolition requires removal under the EPA NESHAPS, or until hazard assessment factors change.



# Section 2 Response Action Determination (continued)

#### **Advantages and Disadvantage to Abatement Alternatives**

The decision trees outlined in AHERA 40 CFR 763 are used to provide the "best" alternative for the specific conditions in each homogeneous area.

Below is a discussion of the alternative approaches to asbestos management in a building.

#### Long Term Operation & Maintenance Program

#### Advantages:

- \*Low initial cost for implementation
- \*Good interim plan
- \*An O&M program may be implemented and carried out by in house trained personnel.

#### Disadvantages:

- \*Asbestos remains in the building
- \*Condition of the asbestos must be monitored
- \*Cost of training and special work procedures may be significant
- \*Effectiveness may be limited where control of the building occupants is difficult

#### **Encapsulation**

#### Advantages:

- \*Reduces the risk of release of asbestos fibers
- \*Initial cost is lower than the cost of asbestos removal
- \*Asbestos-containing material may still serve its initial purpose
- \*Quick temporary means of repair

### Disadvantages:

- \*Asbestos remains in the building and encapsulant makes removal more difficult
- \*Improper encapsulation may cause the material to delaminate or pull away from substrate
- \*Asbestos-containing material must have an O&M program
- \*Similar preparation for asbestos removal is required for encapsulation
- \*Long term cost may be greater than asbestos removal is periodic reapplication of the encapsulant is required



### Section 2 Response Action Determination (continued)

#### **Enclosure**

#### Advantages:

- \*Enclosure reduces immediate exposure
- \*Initial cost of enclosure is lower that the cost of asbestos removal
- \*Asbestos-containing material may still serve its initial purpose
- \*Quick temporary means of repair

#### Disadvantages:

- \*Asbestos remains in place and later removal is more difficult
- \*If maintenance is required of the systems insulated with asbestos, the asbestos will be exposed
- \*An O&M program will have to be implemented for the asbestos-containing material
- \*Similar preparation for asbestos removal is required for enclosure

#### Removal

#### Advantages

- \*Asbestos-containing material is eliminated from the building
- \*There is no need for an O&M plan
- \*Initial cost is great, but the future costs are eliminated

#### Disadvantages:

- \*Reinsulaiton, refireproofing, or replacement of materials may be required
- \*Improper removal may raise levels of airborne fibers higher than background levels
- \*The initial cost of removal is very high
- \*Areas of the building involved in asbestos removal may not be occupied during removal



### **SECTION 3**

**UPDATED RECOMMENDED RESPONSE ACTIONS** 



# Section 3 Updated Recommended Response Actions

The updated recommended response actions are for all the homogenous areas found within the school. The response actions are determined utilizing the decision tree approach for Response Action Determination as described in Section 2.

#### Homogeneous Area #1- Pipe Insulation

**Response Action 1:** The pipe insulation located within the Janitors Closet by Room 128 display damage observed as debris. Retain an Asbestos Project Designer to prepare a Work Plan for the repair of the damaged pipe insulation and retain a Massachusetts certified Abatement Contractor to complete the response action following the Work Plan. Recommended completion date of the work activities: September 2022.

**Response Action 3:** The pipe insulation located within Room 107, Room 109, and Mens Room Chase display minor to moderate damage. Retain an Asbestos Project Designer to prepare a Work Plan for the repair of the damaged pipe insulation and retain a Massachusetts certified Abatement Contractor to complete the response action following the Work Plan. Recommended completion date of the work activities: September 2022.

**Response Action 7:** The pipe insulation located throughout the remainder of the school is in generally good condition. Limit the potential for disturbance and continue the Operations and Maintenance (O&M) Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Affix appropriate asbestos warning labels to Boiler Room and Electrical Room Entrances. Recommended completion date of the work activities: September 2019. Prior to renovation/demolition the material must be removed if it will be disturbed. It should be noted that asbestos-containing pipe insulation may be located above hard ceilings and/or behind walls. As such, a thorough exploratory inspection should be conducted prior to any renovations that may impact wall or ceiling areas.

#### Homogeneous Area #2-Pipe Fitting Insulation

**Response Action 3:** The pipe fitting insulation located within the Electrical Room display minor to moderate damage. Retain an Asbestos Project Designer to prepare a Work Plan for the repair of the damaged pipe fitting insulation and retain a Massachusetts certified Abatement Contractor to complete the response action following the Work Plan. Recommended completion date of the work activities: September 2022.



# Section 3 Updated Recommended Response Actions (Continued)

#### **Homogeneous Area #2-Pipe Fitting Insulation**

Response Action 7: The pipe fitting insulation located throughout the remainder of the school is in generally good condition. Limit the potential for disturbance and continue the O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Affix appropriate asbestos warning labels to Boiler Room and Electrical Room Entrances. Recommended completion date of the work activities: September 2019. It should be noted that asbestos-containing pipe fitting insulation may be located above hard ceilings and/or behind walls. As such, a thorough exploratory inspection should be conducted prior to any renovations that may impact wall or ceiling areas.

#### Homogeneous Area #9- Black Residual Mastic

**Response Action 8:** The Black Residual Mastic not previously identified is located under Non-Asbestos Containing Flooring Materials (i.e. various colored 12"x 12" Floor Tile, Carpet, etc.) at the school. The Black Residual Mastic has been identified within the following areas under Non-Asbestos Containing Flooring Materials in Room 138, Room 119 (Staff Lunch), Nurse Clinic, and Conference Room. Prior to renovation/demolition the material must be removed if it will be disturbed.

#### Homogeneous Area #10 (Previous HA # 3) - Flexible Duct Cloth Connectors

**Response Action 8:** The Flexible Duct Cloth Connectors located within the Attic area of the Addition Structure. Continue the O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Prior to renovation/demolition the material must be removed if it will be disturbed.

#### Homogeneous Area #11- Wood Flooring Paper

**Response Action 8:** The assumed asbestos-containing Wood Flooring Paper is located under the wood floor areas within the first and second floor in the Original Structure at the school. Prior to any renovation and/or demolition activity a thorough exploratory inspection should be conducted to confirm the presence and/or absence of the potential for the suspect flooring paper.

#### **Homogeneous Area #12- Interior Boiler Materials**

Response Action 7/8: Assumed asbestos-containing interior boiler materials potentially may be located within the two boilers at that school. Affix appropriate asbestos warning labels to Boiler Room Entrance. Recommended completion date of the work activities: September 2019. Prior to any renovation and/or demolition activity a thorough exploratory inspection should be conducted to confirm the presence and/or absence of the potential for the suspect interior boiler materials.



# Section 3 Updated Recommended Response Actions (Continued)

#### Homogeneous Area #13- Interior Window Caulking/Glazing

**Response Action 8:** Assumed asbestos-containing interior window caulking and glazing is located within the Kitchen Storage Area at the school. These materials are in generally good condition, non-friable and have a minimum potential for disturbance. These materials should be sampled and analyzed, prior to any renovation and/or demolition that may impact these materials



### **SECTION 4**

RECORDKEEPING REQUIREMENTS AND RECOMMENDATIONS



#### Section 4

#### **Recordkeeping Requirements and Recommendations**

The AHERA regulations have very specific requirement for the maintenance of records associated with the management of asbestos in the school. The following is a list of some of the key items that the LEA Designated Person must maintain as part of the package:

- Initial AHERA inspection report and Asbestos Management Plan
- Subsequent 3-year reinspection reports.
- 6-month surveillance reports.
- Documentation for minor and major fiber release episodes. This includes abatement work performed by outside contractors as well as work performed by 16 hour trained maintenance personnel no matter how small.
- Documentation for completion of response actions (i.e. clearance testing). This should always include applicable training & licensure documentation for whomever performs the work.
- Labeling of ACBM (friable)
- Yearly notice to parents, teachers and staff.
- Training and medical exams for 16-hour trained personnel. Although training does not require renewal. Medicals are to be performed every year. In addition, 16-hour personnel should be fit tested every six months.
- Two hour awareness training for staff. Any new workers are required to receive this training at start of employment. Training should include specific review of ACBM in building their working in.

The above items are some of the key items, which need to be incorporated into the plan. The following are some recommendations are how best to maintain for easy access and review by outside parties:

- Maintain an update the three- ring binder for the school. Have a duplicated copy, one for administration office and one for the facilities office.
- Create tab sections in the binder. Each section should contain the information above. This will allow for easy review and update.
- Ensure that for every major and minor fiber release episode, that all documentation is received.
- As you updated your file, ensure the school's is updated.



# Section 4 Recordkeeping Requirements and Recommendations (cont.)

In addition, it is also required that if outside contractors enter building perform work that they review areas where asbestos may be present that will be near their work. Have a log at the school for them to sign that they have read and understand. This will protect the school from liability and ensure outside contactors will not disturb asbestos. Finally, periodically review program internally and with your 16-hour persons to ensure compliance.

The pipe insulation located within the Janitors Closet by Room 128, Room 107, Room 109, and Mens Room Chase display damage. Retain an Asbestos Project Designer to prepare a Work Plan for the repair of the damaged pipe insulation and retain a Massachusetts certified Abatement Contractor to complete the response action following the Work Plan. Recommended completion date of the work activities: September 2022.

The pipe fitting insulation located within the Electrical Room display minor to moderate damage. Retain an Asbestos Project Designer to prepare a Work Plan for the repair of the damaged pipe fitting insulation and retain a Massachusetts certified Abatement Contractor to complete the response action following the Work Plan. Recommended completion date of the work activities: September 2022.

Affix appropriate asbestos warning labels to Boiler Room and Electrical Room Entrances. Recommended completion date of the work activities: September 2022.

Continue the periodic cleaning schedule. Properly trained staff (i.e. 2-Hour Asbestos Awareness) should conduct the cleaning activities utilizing HEPA-vacuums and/or wet wiping and floor tile maintenance as outlined in the recommended Operations and Maintenance procedures.

A required six-month periodic surveillance inspection should be scheduled for February 2023.

VERTEX recommends an ACMs Survey be conducted prior to any renovation activities to comply with the EPA Title 40 CFR Part 61, NESHAPs and the Massachusetts Department of Environmental Protection Regulations.



#### **SECTION 5**

ESTIMATED RESOURCES REQUIRED TO COMPLETE THE RESPONSE ACTIONS



### Section 5 Estimated Resources Required to Complete the Response Actions

This section contains the estimated resources required to complete the abatement activities of the identified damaged ACBMs. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. The cost estimate below does not include abatement contactor mobilization, abatement design and/or project monitoring services.

Estimated Cost to complete the Response Actions at the Ezra Baker Elementary School located in West Dennis, Massachusetts:

\$500.00

#### Cost Estimate Worksheet can be found in Appendix B.

\*The estimated cost provided above does not include costs that may be associated with abatement consulting, contractor mobilization, two-hour asbestos awareness training, OSHA 16-hr Operations and Maintenance Training and/or the labor to conduct the required six-month surveillance re-inspections. Please refer below for estimated costs associated costs mentioned above:

2-Hour Asbestos Awareness Training= \$75/person
OSHA 16-hr Operations and Maintenance Training = \$300/person
Six-Month Periodic Surveillance Inspection = \$300/inspection
Abatement Work Plan/Design Specification = \$500-\$2,500.00
Mobilization = \$1,500.00-\$2,500.00
Project Monitoring/Clearance Testing = \$520.00-\$600.00/per shift
Transmission Electron Microcopy (TEM) Analysis = \$75.00-\$100.00/sample
Phase Contrast Microscopy (PCM) Analysis = No Charge -\$15.00/sample
Clearance Report Preparation = \$350.00-\$800.00



### **SECTION 6**

ESTIMATED RESOURCES REQUIRED FOR THE ABATEMENT OF THE IDENTIFIED ACBMs



### Section 6 Estimated Resources Required For Abatement of the Identified ACBMs

This section contains the estimated resources required to perform the removal of identified ACBMS, however EPA recommends the ACBMs to be managed in place if they are not damaged. Alternative abatement costs are estimated using current Abatement Contractor Estimates. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. The cost estimate below is a worst case scenario if all identified ACBMs were to be removed. The cost estimate below does not include abatement contactor mobilization, abatement design and/or project monitoring services.

Estimated Cost for the Removal of ACBMs from the Ezra Baker Elementary School located in West Dennis, Massachusetts:

\$219,160.00

#### Cost Estimate Worksheet can be found in Appendix C.

\*\* The estimated cost provided above is developed from current Abatement Contractor Unit pricing. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. In addition, the costs above do not include mobilization of the Abatement Contractor, Abatement Work Plan/Design, Project Monitoring and/or Clearance Testing Services for the completion of the response actions. Please refer for below unit pricing regarding costs for the Contractor Mobilization and Clearance Testing Services:

Abatement Work Plan/Design Specification = \$500-\$2,500.00 Mobilization = \$1,500.00-\$2,500.00 Project Monitoring/Clearance Testing = \$520.00-\$600.00/per shift Transmission Electron Microcopy (TEM) Analysis = \$75.00-\$100.00/sample Phase Contrast Microscopy (PCM) Analysis = No Charge -\$15.00/sample Clearance Report Preparation = \$350.00-\$800.00



### SECTION 7

**OPERATIONS AND MAINTENANCE** 



# Section 7 Operations and Maintenance Program

#### INTRODUCTION

The DYRSD has established an overall asbestos control program that is designed to minimize exposure of all occupants of the school to asbestos fibers located at the Ezra Baker School located in West Dennis, Massachusetts. This Operations and Maintenance (O&M) Plan is an integral part of the overall program. It sets guidelines for the proper in-place management of all assumed and identified asbestos-containing building materials (ACBM) located in the building.

This O&M plan contains the following sections:

- A. A description of the duties of the LEA Designated Person (DP).
- B. A procedure for **notifying** workers, tenants, and other visitors where ACBM are located, and stressing the importance of avoiding disturbing the ACBM in any way.
- C. The detailed description of **O&M Activities**, including:
  - 1. **Emergency procedures** for both major and minor episodes of fiber release;
  - 2. **Periodic surveillance** of ACBM, so that any changes in the condition of ACBM can be noted, assessed, and documented; and
  - 3. Detailed descriptions of **work procedures** for both general maintenance and Asbestos Associated Project Workers, which must be used so that workers can avoid or minimize fiber release when performing activities that may disturb ACBM.
- D. A list of **records** that must be kept to document O&M and abatement activities.
- E. **Training requirements** for the DP, and custodial and maintenance staff.

In general, asbestos represents a health hazard **only** if fibers are breathed into the lungs or, in rare cases, are swallowed. Asbestos-containing materials that are non-friable (i.e. cannot be easily broken of crumbled by hand pressure) are not hazardous as long as they are intact and in good condition. Because friable materials can be easily crumbled or crushed, they are more susceptible to airborne fiber release than are non-friable materials.

It is a policy of the DYRSD that untrained employees and outside contractors **DO NOT** handle, touch or otherwise disturb any material that is asbestos or suspected of containing asbestos. A properly qualified and trained individual must handle any material that is, or may contain asbestos. Non-asbestos materials have been and may be identified by the asbestos coordinator using one or more of the following criteria: (1) lab analysis, (2) results of previous lab analysis, (3) product composition labels, (4) receipts, and so forth. At no time will any employee, student, or outside contractor assume a material to be asbestos-free. An inventory of ACBMs identified from the inspection are presented in Appendix A.



#### 1. DUTIES OF THE ASBESTOS MANAGEMENT PLAN DESIGNATED PERSON

The DP oversees the implementation and management of the O&M plan. Duties of the DP include (1) notifying building staff, workers, and outside contractors where ACBM is located in the building, (2) assigning workers to tasks involving work that may disturb ACBM, (3) ensuring that abatement and O&M activities are conducted by trained qualified personnel, and (4) keeping records of all asbestos-related activities at the property.

The DP must receive training related to asbestos issues (see "Training Requirements" of this plan).

#### 2. NOTIFICATION

The DP shall ensure that building workers, outside contractors, and tenants are notified of the location, quantity, and physical condition of identified and assumed ACBM that they might disturb. Such notification shall be accomplished by written notice, by personal communication, by posting signs at entrances to mechanical areas, and/or by labeling ACBM. By informing occupants of potential hazards in their vicinity, the notification reduces the possibility that occupants will accidentally disturb ACBM. The notification must stress that persons who disturb ACBM may accidentally release asbestos fibers into the air, and that therefore everyone must avoid disturbing ACBM. This notification will assure compliance with Occupational Health and Safety Administration (OSHA) Regulation 29 CFR Part 1926.1101, which regulates asbestos exposure as it relates to construction work (including building maintenance) and with 29 CFR 1910.1001, which regulates asbestos exposure in general industry (including normal housekeeping).

If asbestos-related construction, abatement, of O&M activities is conducted, the DP shall also notify the following persons about the presence, location, and quantity of ACBM:

- A. Employees of the building, such as maintenance and custodial personnel who will work in or adjacent to areas containing ACBM:
- B. Staff who will occupy areas containing ACBM.
- C. Prospective employers applying for or bidding for work if their employees will be expected to work in or adjacent to areas containing ACBM.
- D. Multiple employers occupying a work-site in the building, any of whose employees will be performing work within or adjacent to areas containing ACBM.



Before conducting any work in the building that has the potential to impact ACBM, contractors will be required to sign the Contractor's Asbestos Notification and Acknowledgment Form. In addition, all contractors and contractor's employees who work on the site will be required to notify the DP of the presence, location, and quantity of newly discovered ACBM within 24 hours (or sooner if ACBM is disturbed) of the discovery. If any building materials are discovered, the asbestos content of which is unknown, the material shall be presumed to contain asbestos, until the results of sampling and analysis prove otherwise. Appropriate sampling of the material shall be conducted by a Massachusetts Department of Labor and Work Force Development Division of Labor Standards accredited asbestos inspector and analyzed at an appropriately licensed asbestos analytical laboratory.

The DP shall ensure that all required warning signs are posted during abatement and O&M activities during which the release of asbestos fibers into the air is possible. Warning signs shall demarcate all regulated areas and shall bear the following information:

DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE
CLOTHING ARE REQUIRED IN THIS AREA

Contractors and in-house personnel who remove ACBM within the site shall label all waste containers that contain ACBM waste in accordance with OSHA and EPA guidelines.

The Massachusetts Department of Environmental Protection (DEP) and the Massachusetts Division of Labor Standards (DLS) will be notified anytime work will impact any quantity of ACBM at the school.

The DP shall ensure that all previously installed ACBM that have been identified in the facility are labeled or identified by signs, as feasible. All ACBM that are friable and accessible, such as TSI located in mechanical areas or below suspended ceilings, will be labeled. Labels shall be attached to or posted in areas where employees, residents, and outside contractors who are likely to be exposed will clearly notice (such as at the entrance to mechanical rooms).

The labels shall bear the following information:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

Posted signs may be used in lieu of labels to indicate the type and location of each ACBM.



#### 3. OPERATIONS AND MAINTENANCE ACTIVITIES

Operations and maintenance activities include:

- A. Emergency procedures to be followed in the event of a major or minor episode of fiber release;
- B. Periodic surveillance of ACBM within at the school building;
- C. Work procedures associated with planned maintenance activities that may disturb ACBM. Only properly trained personnel under the control and direction of the DP shall conduct operations and maintenance activities.
- D. Periodic Cleaning Activities

#### A. Emergency Procedures for Fiber Release Episodes

Fiber release episodes are categorized as *major* (the falling or dislodging of more than 3 square feet or 3 linear feet of friable ACBM), or minor (the falling or dislodging of fewer than 3 square feet or 3 linear feet of friable ACBM)

#### PROCEDURE FOR MAJOR EPISODE

- 1. Restrict entry into the area.
- 2. Immediately contact the DP
- 3. Post sign to prevent anyone from entering the area except persons necessary to perform the response action.
- 4. Shut off or temporarily modify the air-handling system to prevent the fibers from being distributed to other areas in the building.
- 5. The DP shall contact an accredited designer of abatement to prepare an abatement plan that specifies the appropriate response actions.
- 6. The DP shall ensure that only a Massachusetts Certified Asbestos Abatement Contractor conducts the response actions.



#### PROCEDURE FOR MINOR EPISODE

- 1. Thoroughly saturate the debris using all wetting methods necessary.
- 2. Clean the area using wet wiping techniques followed by vacuuming with a specially equipped High Efficiency Particulate Air (HEPA) vacuum.
- 3. Place all debris and all contaminated cleaning supplies (mop heads, rags, etc.) into a leak tight container, such as a 6-mil thick polyethylene waste bag, and seal the container. Place the sealed container into a second 6-mil thick polyethylene bag. If labeled waste bags are not used, apply warning label to outside of each bag used.
- 4. Repair the area of damaged ACBM, as follows:
  - a. Use materials such as asbestos-free spackling, plaster, cement, or insulation; or
  - b. Seal the area with latex paint or an encapsulate; or
  - c. Immediately implement other appropriate response action.

#### B. Periodic Surveillance

Periodic surveillance of all known and assumed ACBM shall be conducted once every six months. The purpose of the regularly scheduled surveillance is to ensure that any ACBM that are damaged or that have deteriorated are detected in a timely manner. The DP shall use the information from the periodic surveillance in conjunction with ongoing reports from the periodic

surveillance in conjunction with ongoing reports from service workers of changes in the condition of the ACBM to take corrective action.

The periodic surveillance consists of a visual inspection of all known and assumed ACBM. Periodic surveillance shall also include a visual and physical evaluation of ACBM in order to determine the degree of damage and to assess the likelihood of future fiber release. The area in the immediate vicinity shall also be examined for potential loose ACBM debris. The DP shall record the cause of the damage.

Only persons who have received at least the minimum asbestos-awareness training (see "Training Requirements", of this plan) shall conduct the periodic surveillance. The results of the surveillance shall be recorded on the periodic surveillance inspection form.



#### C. Work Procedures for General Maintenance Personnel

The following work practices shall be prohibited in all circumstances:

- Drilling holes in ACBM;
- Damaging ACBM while moving furniture or other objects;
- Sweeping of dusting floors, ceilings, moldings, or other surfaces in asbestoscontaminated environments;
- Using an ordinary vacuum to clean up asbestos-containing or asbestos contaminated debris (only vacuums equipped with a HEPA filter should be used);
- Removing potentially contaminated ventilation system filters without thoroughly wetting them; and
- Shaking potentially contaminated ventilation system filters.

#### D. Periodic Cleaning

The following is a general outline to be utilized for the properly trained personnel to conduct the periodic cleaning activities:

- Utilization of disposable rags to wet wipe of all non-porous horizontal surfaces followed by the use of a HEPA-equipped vacuum. Dry sweeping and/or dusting is not permitted to be used to clean the surfaces.
- The collected debris within the lined HEPA-equipped vacuum and disposal rags should be properly disposed of in a labeled asbestos-waste bag accompanied by a Waste Shipment Record for future disposal at a permitted facility that accepts asbestos waste.
- Document the Name of the individual conducting the work activities, location date and time of cleaning for proper recordkeeping. These records should be included within the AMP for the school.



## Section 7 Operations and Maintenance Program (Continued)

#### 4. RECORDKEEPING REQUIREMENTS

The building owner shall maintain the following documentation pertaining to ACBM in the facility:

- All data that are relied upon to demonstrate that suspect ACBM do not in fact contain asbestos.
- All data communicated and received that identify the locations and quantities of ACBM.
- All records associated with abatement projects and O&M activities. These
  documents shall be maintained during the term of ownership. They shall then be
  transferred to successive owners, in accordance with OSHA Regulation 1926.1101
  (n).
- If the owner's employees conduct activities that may potentially cause them to be exposed to asbestos fibers, the owner shall keep the following additional records:
- All employee exposure-monitoring records pursuant to OSHA Regulation 1926.1101(f).
- All information relative to medical surveillance of employees pursuant to OSHA Regulation 1926.1101(m). Medical surveillance shall be required only if:
  - 1. Employees are required to conduct tasks that would result in their exposure to airborne concentrations of asbestos above the OSHA permissible exposure limit (PEL): or
  - 2. If employees conduct asbestos abatement tasks for more than 30 days per year.
- The owner shall maintain all employee-training records for one year beyond the employee's last date of employee's last date of employment.

#### 5. TRAINING REQUIREMENTS

The extent of asbestos training for facility employees depends on the type of asbestos-related activities they will conduct. For most employees who will require training, a two-hour awareness course will be sufficient but necessary. For employees who are involved in activities where exposure to airborne asbestos fibers is likely, a more comprehensive 16-hour training course is necessary.



### Section 7 Operations and Maintenance Program (Continued)

#### **AWARENESS TRAINING**

The curriculum shall include instruction in the following:

- The location, quantity, and physical condition of all ACBM located in the facility.
- Recognition of damage, deterioration, and delaminating of ACBM.
- The health effects associated with asbestos exposure, including the relationship between smoking and asbestos in producing lung cancer.
- Procedures to be implemented in the event of a minor or major episode of fiber release.
- The requirements for posting signs and affixing labels, and the meaning of the required legends for such signs and labels.

#### **COMPREHENSIVE WORKER TRAINING**

The curriculum shall include instruction in the following:

- All awareness training information described above.
- The nature of operations that could result in exposure to asbestos, and the importance
  - of necessary protective controls and of procedures for minimizing exposure, including:
  - engineering controls
  - work practices,
  - respirators,
  - housekeeping procedures,
  - hygiene facilities,
  - protective clothing,
  - decontamination procedures,
  - emergency procedures,
  - waste disposal procedures and any necessary instruction in the use of these controls and procedures.

Section 7



#### **Operations and Maintenance Program (Continued)**

- The purpose, proper use, fitting instructions, and limitations of respirators.
- Medical surveillance program requirements
- The contents of the OSHA standard (1926.1101) regarding asbestos in construction.
- Hands-on-training in the use of respiratory protection, other personal protection measures, and work practices.

Detailed procedures for conducting small-scale, short duration abatement activities, as defined in Appendix A to Subpart E to EPA Regulation 40 CFR Part 763.



#### **APPENDIX A**

LOCATIONS OF THE ASBESTOS CONTAINING BUILDING MATERIALS AND UPDATED CONDITONS



#### 3-Year AHERA Re-Inspection August 2022

#### Locations of the Identified Asbestos-Containing Building Materials

Ezra Baker School - 810 Route 28 West Dennis, Massachusetts

Ezra Baker School - 810 Route 28 West Dennis, Massachusetts								
Location	ACBM	Estimated		VERTEX	VERTEX	Fri.	HAHAC	
	Description	Qua	antity	2019	2022		#	
				Cond.	Updated			
					Cond.			
	Addition Section-Upper Level	1						
Room 138/Bathroom	Black Residual Mastic	190	ft <sup>2</sup>	С	С	Ν	5	
	12" x 12" Tan Streak Floor Tile (Contaminated)	190	ft <sup>2</sup>	G	G	Ν	5	
Room 119/Staff Lunch	Black Residual Mastic	900	ft <sup>2</sup>	С	С	Ν	5	
	12" x 12" Beige Spec Floor Tile (Contaminated)	900	ft <sup>2</sup>	G	MD (1ft <sup>2</sup> )	N	5	
Attic	Flexible Duct Connector Cloth	2	Units	G	G	N	5	
Nurse Clinic	Black Residual Mastic	600	ft <sup>2</sup>	С	С	N	5	
	12" x 12" Tan Streak Floor Tile (Contaminated)	600	ft <sup>2</sup>	G	G	N	5	
Principal Office Storage and Bathroom	Pipe and Fitting Insulation (Assumed behind Wall)	U		U	U	U	5	
Conference Room	Black Residual Mastic	180	ft <sup>2</sup>	С	С	N	5	
	12" x 12" Gray Spec Floor Tile (Contaminated)	180	ft <sup>2</sup>	G	G	N	5	
	Original Section-First Floor							
Room 107	Wood Flooring Paper (Assumed)	600	ft <sup>2</sup>	С	С	N	5	
	Pipe Insulation	24	lf	MD (1 lf)	MD (1 lf)	Υ	6	
Men's Room by Main Stair	Pipe Insulation	75	lf	G	G	Υ	6	
Men's Room Chase	Pipe Insulation	15	lf	NA		Υ	1	
Women's Room by Main Stair	Pipe Insulation	30	lf	G	G	Υ	6	
	Pipe Fitting Insulation	1	Unit	G	G	Υ	6	
	Pipe and Fitting Insulation (Assumed behind Wall)			U	U	Υ	5	
Room 108	Wood Flooring Paper (Assumed)	720	ft <sup>2</sup>	С	С	Ν	5	
	Pipe Insulation	10	lf		G	Υ	1	
Men's Room by 109	Pipe Insulation	12	lf	G	G	Υ	6	
	Pipe and Fitting Insulation (Assumed behind Wall)			U	U	U	5	



#### 3-Year AHERA Re-Inspection August 2022

#### Locations of the Identified Asbestos-Containing Building Materials

Ezra Baker School - 810 Route 28 West Dennis, Massachusetts

Ezra Baker School - 810 Route 28 West Dennis, Massachusetts								
Location	ACBM	Estimated		VERTEX	VERTEX	Fri.	HAHAC	
	Description	Qua	ntity	2019	2022		#	
				Cond.	Updated			
					Cond.			
	Original Section-First Floor (Cont	inued)				•		
	Pipe Insulation	36	lf	G	G	Υ	6	
Women's Room by 110	Pipe and Fitting Insulation (Assumed behind Wall)			U	U	U	5	
Room 109	Wood Flooring Paper (Assumed)	600	ft <sup>2</sup>	С	С	U	5	
	Pipe Insulation	12	lf	MD	MD (3 lf)	Υ	1	
Room 110	Wood Flooring Paper (Assumed)	600	ft <sup>2</sup>	С	С	U	5	
	Pipe Insulation	45	lf	G	G	Υ	6	
1st Floor Corridor (107-Gym)	Pipe Insulation	40	lf	G	G	Υ	6	
and (Main Stair -110)	Wood Flooring Paper (Assumed)	1100	ft <sup>2</sup>	С	С	U	5	
Gym/Stage	Wood Flooring Paper (Assumed)	6300	ft <sup>2</sup>	С	С	U	5	
Gym Storage (Right of Stage)	Wood Flooring Paper (Assumed)	260	ft <sup>2</sup>	С	С	U	5	
Gym Chair Storage (Left of Stage)	Wood Flooring Paper (Assumed)	260	ft <sup>2</sup>	С	С	С	5	
	Original Section-Second Floo	or						
204/Library	Wood Flooring Paper (Assumed)	880	ft <sup>2</sup>	С	С	U	5	
202	Wood Flooring Paper (Assumed)	620	ft <sup>2</sup>	С	С	U	5	
200	Wood Flooring Paper (Assumed)	150	ft²	С	С	U	5	
201	Wood Flooring Paper (Assumed)	620	ft <sup>2</sup>	С	С	U	5	
203	Wood Flooring Paper (Assumed)	620	ft²	С	С	U	5	
205	Wood Flooring Paper (Assumed)	620	ft <sup>2</sup>	С	С	U	5	
Attic	Vermiculite Insulation	6000	ft <sup>2</sup>	С	С	U	5	



#### 3-Year AHERA Re-Inspection August 2022

#### Locations of the Identified Asbestos-Containing Building Materials

Ezra Baker School - 810 Route 28 West Dennis, Massachusetts

EZITA BAKET SCHOOL - 810 KOULE 28 WEST DEHILIS, WASSACHUSELLS								
Location	ACBM	Estimated		VERTEX	VERTEX	Fri.	HAHAC	
	Description	Qua	ntity	2019	2022		#	
				Cond.	Updated			
					Cond.			
	Original Section-Ba	sement						
Upper Boiler Room (Electrical Room)	Pipe Insulation	112	lf	G	G	Υ	6	
	Pipe Fitting Insulation	24	Units	D (12 Units)	D (12 Units)	Υ	1	
Lower Boiler Room	Interior Boiler Materials	2	Boilers	U	U	U	5	
Room 127	Pipe Insulation	30	lf	G	G	Υ	6	
	Pipe Fitting Insulation	5	Units	G	G	Υ	6	
	Pipe Insulation (Above Ceiling)	60	lf	G	G	Υ	5	
	Pipe Fitting Insulation (Above Ceiling)	25	Units	G	G	Υ	5	
Janitor Closet by 128	Pipe Insulation	15	lf	D (3 lf)	D (3 lf)	Υ	1	
	Pipe Fitting Insulation	1	Unit	G	G	Υ	6	
	Pipe Insulation	25	lf	G	G	Υ	6	
Doom 130	Pipe Fitting Insulation	4	Units	G	G	Υ	6	
Room 128	Pipe Insulation (Above Ceiling)	60	lf	G	G	Υ	5	
	Pipe Fitting Insulation (Above Ceiling)	25	Units	G	G	Υ	5	
Page 126	Pipe Insulation (Above Ceiling)	209	lf	G	G	Υ	5	
Room 126	Pipe Fitting Insulation (Above Ceiling)	23	Units	G	G	Υ	5	



#### 3-Year AHERA Re-Inspection August 2022

#### **Locations of the Identified Asbestos-Containing Building Materials**

Ezra Baker School - 810 Route 28 West Dennis, Massachusetts

Location	ACBM Description	Estimated Quantity	VERTEX 2019 Cond.	VERTEX 2022 Updated Cond.	Fri.	HAHAC #
	Addition Section-Lowe	r Level				
Kitchen Storage	Interior Window Glazing (Assumed)	1 Unit	G	G	N	5
	Interior Window Caulking (Assumed)	1 Unit	G	G	N	5
Room 131	Pipe Fitting Insulation (Above Ceiling)	10 Units	G	G	Υ	5
Room 130-131 Hallway	Pipe Fitting Insulation (Above Ceiling)	6 Units	G	G	Υ	5

#### Notes:

 $ft^2 = Square \ Foot & Cond. = Condition & U = Unknown \\ If = Linear \ Foot & G = Good & C = Covered \\ Unit = Each & MD = Minor \ Damage & NF = Not \ Found \\$ 

Y= Yes D = Damaged NPI = Not Previously Identified

N = No Fri. = Friable

#### HAHAC # = Homogenous Area Hazard Assessment Category

1 = Damaged/Significantly Damaged Thermal System Insulation

2 = Damaged Friable Surfacing ACBM



Ezra Baker School

810 Route 28 West Dennis, Massachusetts
Page 5
Project # 80960

3 = Significantly Damaged Friable Surfacing ACBM

4 = Damaged or Significantly Damaged Friable Miscellaneous ACBM

5 = ACBM with Potential for Damage

6 = ACBM with Potential for Significant Damage

7 = Any Remaining Friable ACBM or Friable Suspected ACBM

NA = Not Applicable



#### APPENDIX B

ESTIMATED RESOURCES REQUIRED TO COMPLETE THE RESPONSE ACTIONS



#### **Appendix B**

#### 3-Year AHERA Re-Inspection August 2022

#### **Estimated Resources to Complete the Response Actions**

#### Ezra Baker School - 810 Route 28 West Dennis, Massachusetts

L21d Bakel School - 610 Noute 26 West Dellins, Wassachusetts								
Location	ACBM	Estim	ated	Recommended	Estimated	Recommended	Date of	
	Description	Quai	ntity	Response	Cost	Date of Completed	Completed	
				Action		Response Action	Response	
							Action	
	Additi	on Section	n-Upper L	evel				
Room 119/Staff Lunch	12" x 12" Beige Spec Floor Tile (Contaminated)	1	ft <sup>2</sup>	Remove/Repair	\$9.00	February 2023		
	Origi	nal Sectio	n-First Flo	oor				
Room 107	Pipe Insulation	1	lf	Remove/Repair	\$25.00	September 2023		
Room 109	Pipe Insulation	3	lf	Remove/Repair	\$75.00	September 2023		
Original Section-Basement								
Upper Boiler Room				Remove/Repair		September 2023		
(Electrical Room)	Pipe Fitting Insulation	12	Units		\$300.00			
Janitor Closet by 128	Pipe Insulation	3	lf	Remove/Repair	\$75.00	September 2023		

Notes:

If = Linear Foot Unit = Each

Abatement Work Plan/Design Specification = \$500-\$2,500.00 Abatement Contactor Mobilization = \$1,500.00-\$2,500.00



<sup>\*</sup> The estimated cost provided above is developed from current Abatement Contractor Unit pricing. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. In addition, the costs above do not include mobilization of the Abatement Contractor, Abatement Work Plan/Design, Project Monitoring and/or Clearance Testing Services for the completion of the response actions. Please refer for below unit pricing regarding costs for the Contractor Mobilization and Clearance Testing Services:

Ezra Baker School
810 Route 28 West Dennis, Massachusetts
Project # 80960
Project Monitoring/Clearance Testing = \$520.00-\$600.00/per shift
Transmission Electron Microcopy (TEM) Analysis = \$75.00-\$100.00/sample
Phase Contrast Microscopy (PCM) Analysis = No Charge -\$15.00/sample
Clearance Report Preparation = \$350.00-\$800.00

\*\*The estimated cost provided above does not include costs that may be associated with two-hour asbestos awareness training, OSHA 16-hr Operations and Maintenance Training, and/or the labor to conduct the required six-month surveillance re-inspections. Please refer below for estimated costs that may be associated with the mentioned above:

2-Hour Asbestos Awareness Training = \$75/person
OSHA 16-hr Operations and Maintenance Training = \$300/person
Six-Month Periodic Surveillance Inspection = \$400/inspection



#### **APPENDIX C**

ESTIMATED RESOURCES REQUIRED FOR THE ABATEMENT OF THE IDENTIFIED ACBMs



#### **Appendix C**

#### 3-Year AHERA Re-Inspection August 2022

### Estimated Costs for the Removal of the Identified Asbestos-Containing Building Materials Ezra Baker School - 810 Route 28 West Dennis, Massachusetts

Ezra Baker School - 810 Route 28 West Dennis, Massachusetts							
Location	ACBM	Estim	nated	<b>Estimated Cost</b>			
	Description	Quantity					
	Addition Section-Upper Level						
Room 138/Bathroom	Black Residual Mastic	190	ft <sup>2</sup>	\$1,710.00			
	12" x 12" Tan Streak Floor Tile (Contaminated)	190	ft <sup>2</sup>	\$1,710.00			
Room 119/Staff Lunch	Black Residual Mastic	900	ft <sup>2</sup>	\$8,100.00			
	12" x 12" Beige Spec Floor Tile (Contaminated)	900	ft <sup>2</sup>	\$8,100.00			
Attic	Flexible Duct Connector Cloth	2	Units	\$200.00			
Nurse Clinic	Black Residual Mastic	600	ft <sup>2</sup>	\$5,400.00			
	12" x 12" Tan Streak Floor Tile (Contaminated)	600	ft <sup>2</sup>	\$5,400.00			
Principal Office Storage and Bathroom	Pipe and Fitting Insulation (Assumed behind Wall)	U		TBD			
Conference Room	Black Residual Mastic	180	ft <sup>2</sup>	\$1,620.00			
	12" x 12" Gray Spec Floor Tile (Contaminated)	180	ft <sup>2</sup>	\$1,620.00			
	Original Section-First Floor						
Room 107	Wood Flooring Paper (Assumed)	600	ft <sup>2</sup>	\$5,400.00			
	Pipe Insulation	24	lf	\$600.00			
Men's Room by Main Stair	Pipe Insulation	75	lf	\$1,875.00			
Men's Room Chase	Pipe Insulation	15	lf	\$375.00			
Women's Room by Main Stair	Pipe Insulation	30	lf	\$750.00			
	Pipe Fitting Insulation	1	Unit	\$25.00			
	Pipe and Fitting Insulation (Assumed behind Wall)	U		TBD			
Room 108	Wood Flooring Paper (Assumed)	720	ft <sup>2</sup>	\$6,480.00			
	Pipe Insulation	10	lf	\$250.00			
Men's Room by 109	Pipe Insulation	12	lf	\$300.00			
	Pipe and Fitting Insulation (Assumed behind Wall)	U		TBD			



# Appendix C 3-Year AHERA Re-Inspection August 2022 Estimated Costs for the Removal of the Identified Asbestos-Containing Building Materials Ezra Baker School - 810 Route 28 West Dennis, Massachusetts

Ezra baker School - 810 Route 28 West Dennis, Massachusetts								
Location	ACBM	Estimated		Estimated				
	Description	Quantity		Cost				
	Original Section-First Floor (Continued)							
	Pipe Insulation	36	lf	\$900.00				
Women's Room by 110	Pipe and Fitting Insulation (Assumed behind Wall)			TBD				
Room 109	Wood Flooring Paper (Assumed)	600	ft <sup>2</sup>	\$5,400.00				
	Pipe Insulation	12	lf	\$300.00				
Room 110	Wood Flooring Paper (Assumed)	600	ft <sup>2</sup>	\$5,400.00				
	Pipe Insulation	45	lf	\$1,125.00				
1st Floor Corridor (107-Gym)	Pipe Insulation	40	lf	\$1,000.00				
and (Main Stair -110)	Wood Flooring Paper (Assumed)	1100	ft <sup>2</sup>	\$9,900.00				
Gym/Stage	Wood Flooring Paper (Assumed)	6300	ft <sup>2</sup>	\$56,700.00				
Gym Storage (Right of Stage)	Wood Flooring Paper (Assumed)	260	ft <sup>2</sup>	\$2,340.00				
Gym Chair Storage (Left of Stage)	Wood Flooring Paper (Assumed)	260	ft <sup>2</sup>	\$2,340.00				
	Original Section-Second Floor							
204/Library	Wood Flooring Paper (Assumed)	880	ft <sup>2</sup>	\$7,920.00				
202	Wood Flooring Paper (Assumed)	620	ft <sup>2</sup>	\$5,580.00				
200	Wood Flooring Paper (Assumed)	150	ft <sup>2</sup>	\$1,350.00				
201	Wood Flooring Paper (Assumed)	620	ft <sup>2</sup>	\$5,580.00				
203	Wood Flooring Paper (Assumed)	620	ft <sup>2</sup>	\$5,580.00				
205	Wood Flooring Paper (Assumed)	620	ft <sup>2</sup>	\$5,580.00				
Attic	Vermiculite Insulation	6000	ft <sup>2</sup>	\$36,000.00				



# Appendix C 3-Year AHERA Re-Inspection August 2022 Estimated Costs for the Removal of the Identified Asbestos-Containing Building Materials Ezra Baker School - 810 Route 28 West Dennis, Massachusetts

LZIA DAKEI SCHOOL - 010 NOULE 20 WESt DEIIIIS, MASSACHUSELIS							
Location	ACBM	Estimated Quantity		Estimated			
	Description			Cost			
	Original Section-Basement						
Upper Boiler Room (Electrical Room)	Pipe Insulation	112	lf	\$2,800.00			
	Pipe Fitting Insulation	24	Units	\$600.00			
Lower Boiler Room	Interior Boiler Materials	2	Boilers	TBD			
Room 127	Pipe Insulation	30	lf	\$750.00			
	Pipe Fitting Insulation	5	Units	\$125.00			
	Pipe Insulation (Above Ceiling)	60	lf	\$1,500.00			
	Pipe Fitting Insulation (Above Ceiling)	25	Units	\$625.00			
Janitor Closet by 128	Pipe Insulation	15	lf	\$375.00			
	Pipe Fitting Insulation	1	Unit	\$25.00			
	Pipe Insulation	25	lf	\$625.00			
Boom 130	Pipe Fitting Insulation	4	Units	\$100.00			
Room 128	Pipe Insulation (Above Ceiling)	60	lf	\$1,500.00			
	Pipe Fitting Insulation (Above Ceiling)	25	Units	\$625.00			
Poom 136	Pipe Insulation (Above Ceiling)	209	lf	\$5,225.00			
Room 126	Pipe Fitting Insulation (Above Ceiling)	23	Units	\$575.00			



#### **Appendix C**

#### 3-Year AHERA Re-Inspection August 2022

## Estimated Costs for the Removal of the Identified Asbestos-Containing Building Materials Ezra Baker School - 810 Route 28 West Dennis, Massachusetts

Location	ACBM	Estimated	Estimated Cost			
	Description	Quantity				
Addition Section-Lower Level						
Kitchen Storage	Interior Window Glazing (Assumed)	1 Unit	\$200.00			
	Interior Window Caulking (Assumed)	1 Unit	\$200.00			
Room 131	Pipe Fitting Insulation (Above Ceiling)	10 Units	\$250.00			
Room 130-131 Hallway	Pipe Fitting Insulation (Above Ceiling)	6 Units	\$150.00			

Notes:

ft<sup>2</sup> = Square Foot If = Linear Foot

Unit = Each



#### **APPENDIX D**

PERSONNEL CERTIFICATIONS



#### The Vertex Companies, LLC

#### **ACCREDITATION PAGE**

Name:	loccica	۱۸/۵	ltemate
mame: .	Jessica	VVO	itemate

Accreditation Number: AI901049

	Jessica Wolfemale	
Signature:	<i>V</i>	
Date:	8/23/22	

#### **Accredited Management Planner**

Name: Jason Mohre

Accreditation Number: AP000080

Signature:\_\_\_\_\_

Date: 8/23/22



#### **APPENDIX E**

**DESIGNATED PERSON ASSURANCES SIGN-OFF** 



#### **DESIGNATED PERSON ASSURANCES**

In accordance with 40 CFR ' 763.93(i) of the Environmental Protection Agency Asbestos-Containing Material in Schools regulation, the undersigned Local Education Agency (LEA) Designated Person (DP) hereby certifies that the following general responsibilities of the LEA under 40 CFR ' 763.84 have been or will be met:

- 1.Ensure that the activities of any persons who perform inspections, reinspections, and periodic surveillance, develop and update management plans, and develop and implement response actions, including operations and maintenance, are carried out in accordance with Part 763, Subpart E.
- 2. Ensure that all custodial and maintenance employees are properly trained as required by Part 763, Subpart E and other applicable Federal and/or State regulations (e.g., the Occupational Safety and Health Administration asbestos standard for construction, the EPA worker protection rule, or applicable State regulations).
- 3. Ensure that workers and building occupants, or their legal guardians, are informed at least once each school year about inspections, response actions, and post-response action activities, including periodic reinspection and surveillance activities that are planned or in progress.
- 4. Ensure that short-term workers (e.g., telephone repair workers, utility workers, or exterminators) who may come in contact with asbestos in a school are provided information regarding the locations for Asbestos-Containing Building Materials (ACBM) and suspected ACBM assumed to be Asbestos-Containing Materials (ACM).
- 5. Ensure that warning labels are posted in accordance with '40 CFR 763.95.
- 6. Ensure that management plans are available for inspection and notification of such availability has been provided as specified in the management plan under ' 40 CFR 763.93(g).
- 7. Designate a person to ensure that requirements under '763.84 are properly implemented and ensure that the designated person receives adequate training to perform duties assigned under '763.84. Such training shall provide, as necessary, basic knowledge of: health effects of asbestos; detection, identification, and assessment of ACM; options for controlling ACBM; asbestos management programs; relevant Federal and State regulations concerning asbestos, including those in Part 763, Subpart E and those of the Occupational Safety and Health Administration, U.S. Department of Transportation and the U.S. Environmental Protection Agency.
- 8. Consider whether any conflict of interest may arise from the inter-relationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities under Part 763, Subpart E.

Name of Designated Person:	
Designated Person's Signature:	Date:

## APPENDIX F SIX-MONTH SURVEILLANCE



	- X - 2								
AHERA Six-Month Surveillance Inspo	<u> </u>								
Inspector (Print Name):									
Inspector Signature:		_							
	Ezra Baker School - 810 Route 28 Wes								
Location	ACBM		nated	VERTEX	Feb	Aug	Feb	Aug	Feb
	Description	Quantity		2022	2023	2023	2024	2024	2025
				Cond.	Cond.	Cond.	Cond.	Cond.	Cond.
	Addition Section-Uppe					T	T	T	
Room 138/Bathroom	Black Residual Mastic	190	ft <sup>2</sup>	С					
	12" x 12" Tan Streak Floor Tile (Contaminated)	190	ft <sup>2</sup>	G					
Room 119/Staff Lunch	Black Residual Mastic	900	ft <sup>2</sup>	С					
	12" x 12" Beige Spec Floor Tile (Contaminated)	900	ft <sup>2</sup>	MD (1ft <sup>2</sup> )					
Attic	Flexible Duct Connector Cloth	2	Units	G					
Nurse Clinic	Black Residual Mastic	600	ft <sup>2</sup>	С					
	12" x 12" Tan Streak Floor Tile (Contaminated)	600	ft <sup>2</sup>	G					
Principal Office Storage and Bathroom	Pipe and Fitting Insulation (Assumed behind Wall)	U		U					
Conference Room	Black Residual Mastic	180	ft <sup>2</sup>	С					
	12" x 12" Gray Spec Floor Tile (Contaminated)	180	ft <sup>2</sup>	G					
	Original Section-First	Floor							
Room 107	Wood Flooring Paper (Assumed)	600	ft <sup>2</sup>	С					
	Pipe Insulation	24	lf	MD (1 lf)					
Men's Room by Main Stair	Pipe Insulation	75	lf	G					
Men's Room Chase	Pipe Insulation	15	lf	NA					
Women's Room by Main Stair	Pipe Insulation	30	lf	G					
	Pipe Fitting Insulation	1	Unit	G					
	Pipe and Fitting Insulation (Assumed behind Wall)			U					
Room 108	Wood Flooring Paper (Assumed)	720	ft <sup>2</sup>	С					
	Pipe Insulation	10	lf	G	·				-
Men's Room by 109	Pipe Insulation	12	lf	G					

Pipe and Fitting Insulation (Assumed behind Wall)

AHERA Six-Month Surveillance I	-										
Inspector (Print Name):											
Inspector Signature:											
	Ezra Baker School - 810 Route 28 W	est De	nnis, M	assachusetts	5	•					
Location	ACBM		nated	VERTEX	Feb	Aug	Feb	Aug	Feb		
	Description	Qua	ntity	2022	2023	2023	2024	2024	2025		
				Cond.	Cond.	Cond.	Cond.	Cond.	Cond.		
Original Section-First Floor (Continued)											
	Pipe Insulation	36	lf	G							
Women's Room by 110	Pipe and Fitting Insulation (Assumed behind Wall)			U							
Room 109	Wood Flooring Paper (Assumed)	600	ft <sup>2</sup>	С							
	Pipe Insulation	12	lf	MD (3 lf)							
Room 110	Wood Flooring Paper (Assumed)	600	ft <sup>2</sup>	С							
	Pipe Insulation	45	lf	G							
1st Floor Corridor (107-Gym)	Pipe Insulation	40	lf	G							
and (Main Stair -110)	Wood Flooring Paper (Assumed)	1100	ft²	С							
Gym/Stage	Wood Flooring Paper (Assumed)	6300	ft <sup>2</sup>	С							
Gym Storage (Right of Stage)	Wood Flooring Paper (Assumed)	260	ft²	С							
Gym Chair Storage (Left of Stage)	Wood Flooring Paper (Assumed)	260	ft <sup>2</sup>	С							
	Original Section-Sec	ond Flo	or								
204/Library	Wood Flooring Paper (Assumed)	880	ft²	С							
202	Wood Flooring Paper (Assumed)	620	ft²	С							
200	Wood Flooring Paper (Assumed)	150	ft <sup>2</sup>	С							
201	Wood Flooring Paper (Assumed)	620	ft <sup>2</sup>	С							
203	Wood Flooring Paper (Assumed)	620	ft <sup>2</sup>	С							
205	Wood Flooring Paper (Assumed)	620	ft <sup>2</sup>	С							
Attic	Vermiculite Insulation	6000	ft <sup>2</sup>	С							

AHERA Six-Month Surveillance Ins	pection Date:											
Inspector (Print Name):												
Inspector Signature:												
Ezra Baker School - 810 Route 28 West Dennis, Massachusetts												
Location	ACBM	Estir	nated	VERTEX	Feb	Aug	Feb	Aug	Feb			
	Description	Qua	ntity	2022	2023	2023	2024	2024	2025			
				Cond.	Cond.	Cond.	Cond.	Cond.	Cond.			
Original Section-Basement												
Upper Boiler Room (Electrical Room)	Pipe Insulation	112	lf	G								
	Pipe Fitting Insulation	24	Units	D (12 Units)								
Lower Boiler Room	Interior Boiler Materials	2	Boilers	U								
Room 127	Pipe Insulation	30	lf	G								
	Pipe Fitting Insulation	5	Units	G								
	Pipe Insulation (Above Ceiling)	60	lf	G								
	Pipe Fitting Insulation (Above Ceiling)	25	Units	G								
Janitor Closet by 128	Pipe Insulation	15	lf	D (3 lf)								
	Pipe Fitting Insulation	1	Unit	G								
	Pipe Insulation	25	lf	G								
Room 128	Pipe Fitting Insulation	4	Units	G								
KOOIII 128	Pipe Insulation (Above Ceiling)	60	lf	G								
	Pipe Fitting Insulation (Above Ceiling)	25	Units	G								
Doom 126	Pipe Insulation (Above Ceiling)	209	lf	G								
Room 126	51 51.11 1 1 1 1 (A) 6 111 N											

23 Units

Pipe Fitting Insulation (Above Ceiling)

Inspector (Print Name):	nce Inspection Date:	<u> </u>						
Inspector Signature:								
	Ezra Baker School - 810 Route	28 West Dennis, Ma	assachusetts	3				
Location	ACBM	Estimated	VERTEX	Feb	Aug	Feb	Aug	Feb
	Description	Quantity	2022	2023	2023	2024	2024	2025
			Cond.	Cond.	Cond.	Cond.	Cond.	Cond.
	Addition Secti	on-Lower Level						
Kitchen Storage	Interior Window Glazing (Assumed)	1 Unit	G					
	Interior Window Caulking (Assumed)	1 Unit	G					
Room 131	Pipe Fitting Insulation (Above Ceiling)	10 Units	G					
Room 130-131 Hallway	Pipe Fitting Insulation (Above Ceiling)	6 Units	G					

#### Notes:

Y= Yes D = Damaged NPI = Not Previously Identified

N = No Fri. = Friable

**APPENDIX G** 

**SCHEMATICS** 



